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## UNITED STATES DEPARTMENT OF AGRICULTURE

## Forest Service

U. S. Department of Agriculture.

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## A WOOD PULP LABORATORY

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Forest Service to Experiment with Many Woods for  
Pulp Making

Washington, D. C., July 17.--The Forest Service has established a laboratory at 696 East First Street, Boston, Mass., for the purpose of making investigations and experiments in the manufacture of sulphite or chemical wood pulps.

There are, generally speaking, two kinds of wood pulp, mechanical and chemical, the first obtained from grinding the wood, and the second from a disintegration by chemicals. Caustic soda is used to a limited degree, but by far the greater part of the chemical pulp is made through the agency of sulphurous acid and is known as sulphite wood pulp. It is relied upon as the strength-giving stock in most of the cheaper grades of paper, being used in connection with the cheaper and less strong mechanical pulp, in the proportion of three or four parts in ten.

To supply the enormous demand for the sulphite product more than 1,500,000 cords of wood are used annually. Nearly four-fifths of this amount is spruce. A rapid diminution in the supply of standing spruce and a consequent marked increase in its cost are the results of this great and growing demand. Therefore a principal object of this laboratory is to experiment on the pulp-making possibilities of other woods, with reference to obtaining; First, a pulp that will approximate spruce pulp to replace it where spruce is now used; second, other fibers that may have properties peculiarly adapted to special kinds of paper making; third, a pulp of marketable value as a by-product from the waste material from sawmill and lumbering operations. *Res.*

The laboratory is conducted in connection with a model plant which has a capacity of about 65 tons of pulp a day. It is equipped with a chipper, liquor-making apparatus, digester, screen, vats, and moulds for making sheets of pulp, a press, and the boiler and engine required for operating the plant.

The samples of wood used will be collected by members of the Forest Service in order that there may be no question as to their identification. After barking, the wood will be chipped, cooked in the model digester, blown out into the blow-off pit, washed, and screened. The fiber will then be formed into sheets by hand, and the water removed with a power press.







The object of the Forest Service experiments will be to make sulphite pulp in this matter from a large variety of American woods. The various fibers will be studied microscopically, and good-sized samples of the pulps will be available for distribution among the pulp and paper makers that they may judge of the usefulness of the various pulps for general or specific purposes.



The object of this report is to  
show the results of the work  
done during the year 1911.  
The work has been done  
under the direction of the  
Committee on the  
History of the  
United States.

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